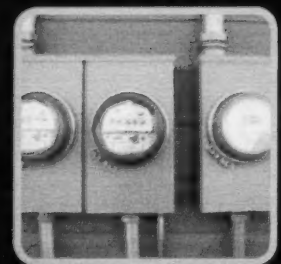
IKUMMATIIT

The Government of Nunavut Energy Strategy

September 2007



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The Goverment of Nunavut Energy Strategy

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Message from the Minister

Welcome to Ikummatiit, Nunavut's strategy to create an energy system that is affordable, sustainable, reliable and environmentally responsible. Inuit elders and Inuit Qaujimjatuqangit coordinators in the Government of Nunavut put forward the name Ikummatiit for this energy strategy. Ikummatiit means different forms of energy and thus is an appropriate name, considering what needs to be done to lessen our dependency on fossil fuels.

During the March 2007 session of the Legislature, I tabled A Discussion Paper for Ikummatiit as a prelude to the creation of this strategy. Responses from our consultations on that document are reflected in Ikummatiit.

This energy strategy will enable Nunavut to reduce its dependency on fossil fuels, a dependency that holds Nunavut hostage to volatile, world oil prices and makes us one of the largest per-person greenhouse gas producers in Canada.

To reduce this dependency we must harness different forms of energy, such as hydro-electricity, wind power and solar power, and eventually other exciting and new energy sources. In addition to exploring and using new sources of energy, we must deal with the challenges we currently face by using our energy more prudently and by streamlining and strengthening the management of our energy system. This strategy will result in a stronger and more efficiently managed system and a reduction in our energy consumption.

Development of renewable energy sources is a key component of Ikummatiit. Another important element is public education aimed at promoting energy conservation and providing information for our citizens in order to help them make sound decisions about their energy use.

Small jurisdictions such as Nunavut must continue to work with the federal government and we will also need to be innovative when it comes to exploring partnerships with the private sector to enable us to create a viable energy system that is no longer totally dependent on fossil fuel.

Simply stated, Nunavut needs to wean itself off oil—and this strategy lays out the steps to achieving this objective. It is part of our culture to adapt and thrive in challenging conditions. We will deal with our energy challenges, and I look forward to working with Nunavummiut as we implement Ikummatiit.

The Hon. Edward Picco
MLA, Minister of Energy

Ikummatiit, the Government of Nunavut's Energy Strategy, is intended to guide the evolution of Nunavut's energy policies and related Government programs and activities from today until the year 2020. The strategy lays out a framework for achieving our primary objective: reducing Nunavut's dependence on fossil fuels.

In implementing this strategy, departments and agencies will develop action plans, budget requirements and detailed timelines. As implementation proceeds, the Government of Nunavut (GN) will develop alliances with the Government of Canada, the private sector and other circumpolar jurisdictions.

The policy actions are categorized into four themes:

- energy conservation and efficiency,
- alternative energy, including the development of hydro-electricity,
- better management practices, and
- oil, gas and uranium development.

Our Vision

In 2020, Nunavut will have a sustainable energy system that is secure, environmentally responsible, and optimizes economic benefits for Nunavummiut, both today and tomorrow.

Guiding Principles

Ikummatiit will reflect *Pinasuaqtavut 2004-2009*, the Government's mandate document, and Inuit Qaujimjatuqangit principles.

One of the key objectives in *Pinasuaqtavut 2004-2009* is to conserve and reduce the use of energy and to find alternatives to diesel fuel for electricity generation.

In keeping with the spirit of the Inuit Qaujimajatuqangit principles of *Aajiiqatigiiniq* (decision making through discussion and consensus), *Piliriqatigiiniq* (working together for a common cause), *Qanuqtuurniq* (being innovative and resourceful) and *Avatittinnik Kamatsiarhiq* (respect and care for the land, animals and the environment), the Government consulted with key sectors in Nunavut. The GN will continue to develop the necessary policy actions in consultation with citizens and partners.

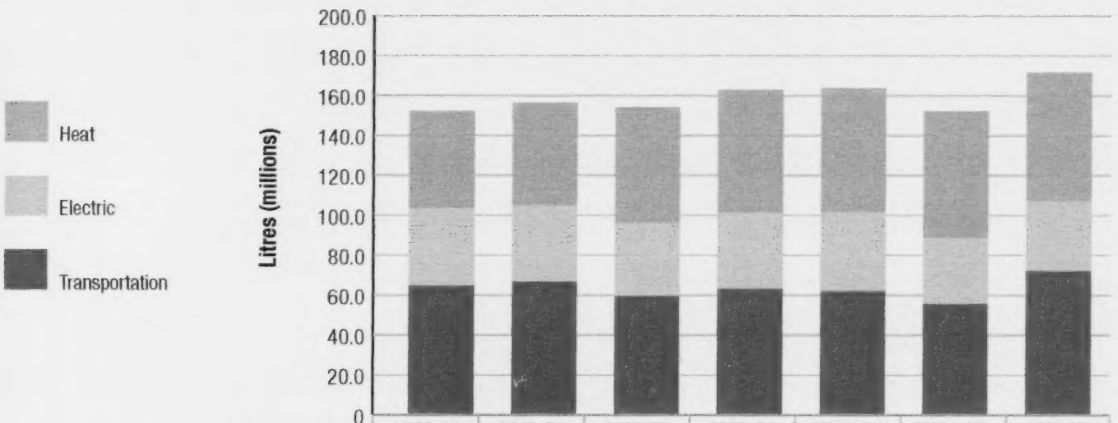
Our Strategic Objectives

This strategy seeks to achieve the following objectives:

- Improve the security of the energy system by reducing reliance on imported fossil fuels, diversifying energy supply to include clean, alternative energy and domestic energy sources.
- Manage the cost of energy-based services such as transportation, heating, hot water, lighting, and cooking, by reducing the cost of providing energy and improving the efficiency of its use.
- Reduce the impact on the environment by reducing energy-related emissions which contribute to pollution and climate change.
- Provide business and employment opportunities as the Territory increases energy efficiency and uses renewable and domestic energy sources.

There have been several significant and positive changes that have strengthened Nunavut's energy system since the Territory was created. Qulliq Energy Corporation (QEC) was created as Nunavut's electricity supplier. Heat redistribution systems, which recycle exhaust heat from electricity generation plants are well established in several communities and are about to be expanded.

Figure 1: Petroleum Product Sales by End Use, FY 00/01 to 05/06[2]



	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Heat	48.6	51.7	57.9	61.6	62.3	63.3	64.9
Electric	38.9	38.0	36.7	38.0	39.3	33.2	34.9
Transportation	64.6	66.8	59.4	63.2	62.1	55.5	72.1

As well, the QEC has embarked on work to investigate the feasibility of developing hydro-electricity to reduce Nunavut's dependency on fossil fuels. However, a number of international events have challenged the energy system, increased its costs, and raised concerns about the impact on the environment because of Nunavut's total reliance on fossil fuels.

Energy Consumption, Fiscal Years 1999/2000 to 2006/07

The GN purchases and distributes Nunavut's annual fuel supply. In fiscal year 2005/06, the GN sold 172 million litres of petroleum products. Based on the data from fiscal year 1999/00 to fiscal year 2005/06, transportation energy consumption accounted for 40% of petroleum product purchases, the provision of heat and hot water 37%, and electrical generation 23%. Petroleum product sales for the past seven years are outlined in Figure 1.

The amount of petroleum products purchased has grown by 19.75 million litres (13%) per year from fiscal year 1999/00 to fiscal year 2005/06. The major increases in volumes sold from fiscal year 1999/00 to fiscal year 2005/06 were in the sale of fuel oil for heating (an increase of 16.3 million litres per year) and in the sale of transportation fuels (7.5 million litres). These were offset somewhat by the decrease of 4.1 million litres per year for electricity generation.

The cost of petroleum products increased over the six-year period. This resulted in the Government of Nunavut spending approximately 20% of its annual budget on energy during fiscal year 2005/06.

1 The energy data in this report was provided by the Petroleum Products Division and reflects annual sales to specific consumer groups.

2 The electricity fuel purchases for fiscal years 1999/00 and 2000/01 consist of sales from PPD, plus an estimate of the purchases from private vendors.

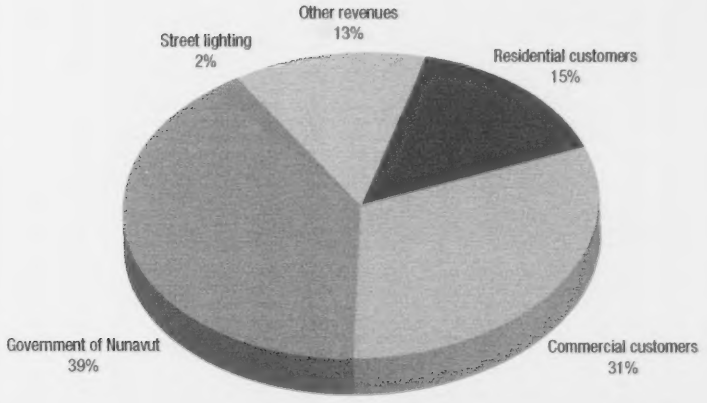
3 The quantities of petroleum products used to quantify annual sales reflect the sales from PPD to the various consumer groups and will be different than the quantities that were actually consumed in a particular year. This difference is the amount that was/is stored and used in the previous/following year.

Electricity Purchasers

Qulliq Energy Corporation customer categories (based on revenue) are identified in Figure 2. The 'Other Revenue' category includes revenue from residual heat sale, street lamps, housing subsidy accounts and fuel equalization transfers.

The primary consumer of electricity in Nunavut is the Government of Nunavut, including public housing, local communities and the GN-owned commercial buildings. Government of Nunavut payments make up 39% of QEC's revenue. The GN is also the largest indirect consumer of much of the electricity used in the commercial and the residential sectors through its leased buildings.

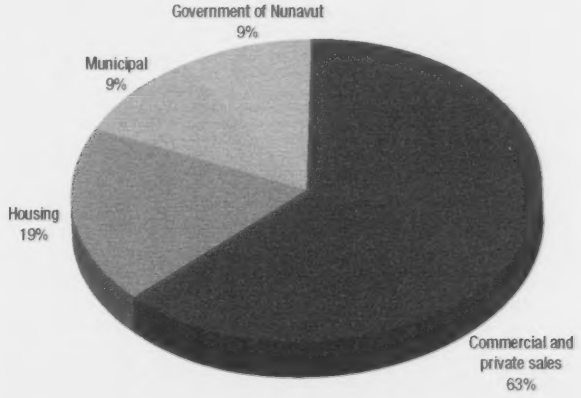
Figure 2: Electricity Sales by Customer Group, FY 00/01 to 04/05



Heating Fuel Purchasers

The public sector directly purchases 37% of all petroleum products used for heating buildings and hot water. However, it is responsible for the majority of the commercial and private sector sales as well through its leased building portfolio. Figure 3 displays sales of petroleum products used to heat buildings and water, by purchaser.

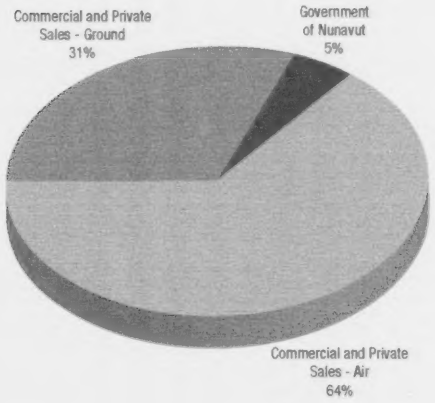
Figure 3 : Average Fossil Fuel Sales by Customer for Heat and Hot Water, FY 00/01 to 05/06



Transportation Fuel Purchasers

From fiscal year 1999/2000 to fiscal year 2005/06, the GN directly bought five percent of the fossil fuel used for transportation (Figure 4). Ninety-five percent is purchased by the commercial and private sectors. Commercial and private-sector sales for air travel accounted for 64% and ground travel for 31%. However, the GN is still the major indirect user of transportation fuels through the travel of its employees, and its various services such as medical travel.

Figure 4: Transportation Petroleum Product Sales, FY 00/01 to 05/06



Energy consumption has grown by an average of two percent per year. Heating fuel sales have increased by five percent per year, and transportation fuel sales increased by two percent annually, over Nunavut's seven-year timeframe.

Fossil Fuel Spills

The Government of Nunavut's Department of Environment, in coordination with the Government of the Northwest Territories, monitors spills across the two territories—as recorded through the Hazardous Materials Spill Report Line. Figure 5 below summarizes the data collected for spills of transportation and heating petroleum products in Nunavut from 1999 to 2007. There has been a significant number of fossil-fuel spills in Nunavut and these appear to be increasing with time.

Energy Forecast, Fiscal Years 2008/09 to 2019/20

If the current two percent annual growth in consumption continues, Nunavut will consume 227 million litres of petroleum products in the fiscal year ending in 2020, an increase of 75 million litres annually. However, there are a number of significant variables that could drive this consumption even higher. The key ones are the increasing Canadian presence in the Arctic, increasing mining and exploration activity, and the continuing increase in tourism and shipping. Figure 6 illustrates the forecasted growth in petroleum product sales from the inception of Nunavut to the year 2020.

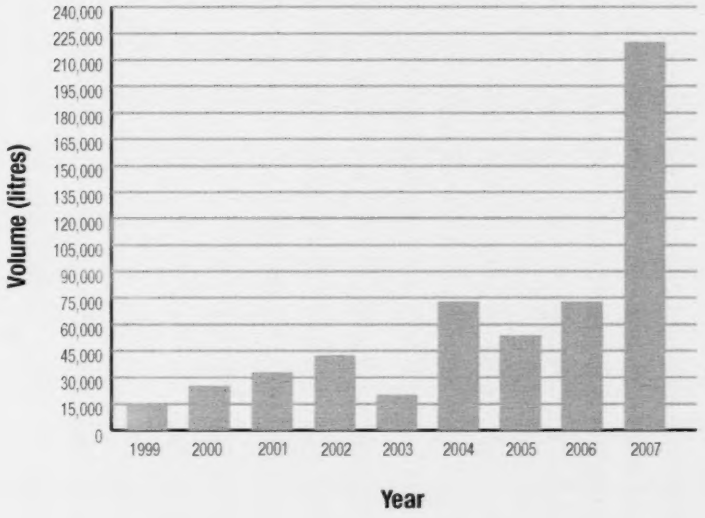
Qulliq Energy Corporation forecasts electrical sales growth of 96 million kWh by the year 2020. If the current pattern of electricity generation remained unchanged, this would represent

annual consumption of 55 million litres of diesel. However, as QEC implements further diesel-generation improvements and develops non-diesel energy sources, this quantity could be reduced.

Heating fuel sales increased an average of five percent annually from fiscal year 1999/2000 to 2005/06. If this trend continues, consumption of heating fuel will rise from 48.5 million litres per year to 128.5 million litres by 2020 (Figure 6).

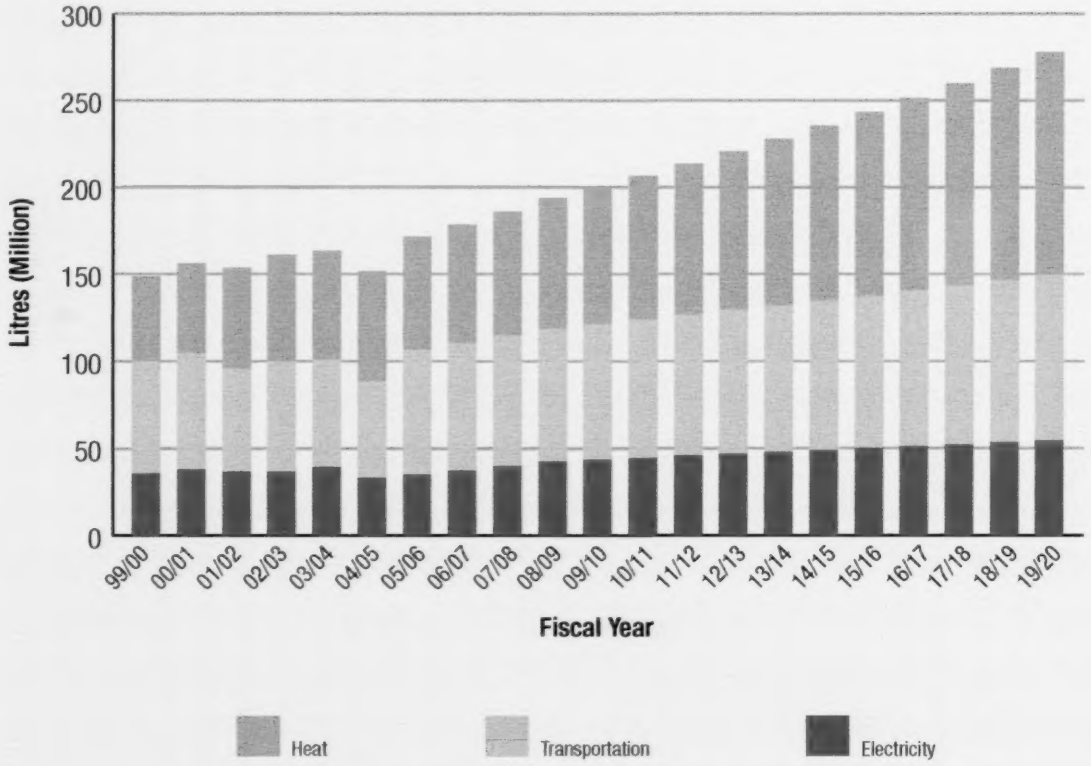
Transportation fuels have grown an average of two percent per year over the seven year period from fiscal year 1999/2000 to 2005/06. If growth continues to increase by two percent annually, consumption will grow from 64.6 million litres per year to 95.6 million litres by 2020 (Figure 6).

Figure 5: Nunavut Oil Spills, 1999/2007



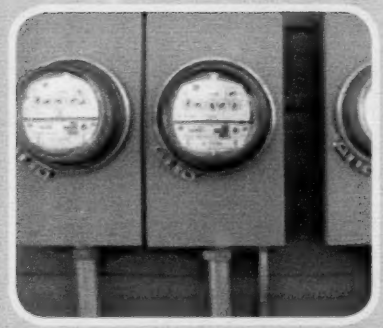
Energy conservation and efficiency, and the substitution of clean renewable energies for imported petroleum products, will all play a part in reducing this growth. In particular, the introduction of hydro-electric power to Iqaluit could reduce the consumption of fossil fuel by up to 12 million litres annually.

Figure 6: Petroleum Product Sales Forecast 2009 to 2020



Quick Start

In spring 2006, the Government of Nunavut introduced "Save 10," its energy efficiency and awareness program for employees, and "Save 10" developed "energy conservation" lesson plans for Kindergarten to Grade 12.



Objective

To implement a series of policy actions that encourage the adoption of energy conservation and efficiency, thereby reducing Nunavut's energy costs and its reliance on imported fossil fuel.

Energy Awareness Initiative

The Government of Nunavut will initiate a 10-year program to raise awareness and understanding of energy efficiency and conservation.

- Resource Centre

  A resource centre will be established that will provide information and educational materials on energy efficiency and alternative energy. Demonstration materials will be developed to support workshops and information sessions throughout the Territory. The resource centre will eventually become an Arctic Centre of Excellence for arctic technologies and hydro-electric generation.

  A public-awareness campaign with measurable goals, outputs and performance indicators will be undertaken. Directed at the needs of tenants, private home owners and small businesses, the campaign will help to raise awareness of new technologies and energy-efficient practices.

- Retailer Point-of-Sale Program

  The GN will initiate a "Point-of-Sale" program that will place information regarding energy efficiency and alternative energy in stores, so that Nunavummiut will have access to this information when buying appliances and services.

- Save 10 – Employee Awareness Program

  In 2005, the Department of Community and Government Services introduced its "Save 10" program. Save 10 promotes energy-efficiency awareness to GN employees and building occupants through newsletters, its website, and periodic information sessions and documents. It is also a key component of building retrofit projects. In the future this initiative will be enhanced to include signage in buildings that are being retrofitted, an energy advocate, and a series of information seminars.

Energy Education Initiative

Nunavut Arctic College plays an important role in providing training and skills to those who work with energy. The GN will work with Nunavut Arctic College to help make Nunavummiut more aware of energy issues.

- Building Operators and Managers

  Nunavut Arctic College is the delivery partner for the national Building Environmental Systems Program for building operators and managers. The College will deliver the program to relevant GN employees either onsite or through the College's distant learning services. The first pilot project is in Iqaluit.

- Building Inspectors

  The lack of trained building inspectors presents several challenges. Poorly built and commissioned buildings are usually energy inefficient buildings. The GN will develop a strategy to increase the number of inspectors and will work with the Nunavut Arctic College to develop and introduce an arctic buildings inspector training and accreditation program.

- Energy Efficiency and Alternative Energy Trades Training

  Given the need for tradespeople who understand energy efficiency and alternative energy, the Rankin Inlet Trades School will seek funding partners and develop Nunavut-specific training programs. This will ensure that Nunavummiut have the opportunity to participate in future energy projects.

- Kindergarten to Grade 12 Energy Curriculum

  All Nunavut schools have a key role in ensuring that Nunavummiut become more energy conscious. Building on the current Save 10 lesson plans for grades Kindergarten to Grade 12, the Government will develop and introduce an arctic-specific energy-efficiency and alternative-energy curriculum.

Buildings and Equipment Initiative

The GN will encourage and motivate building owners, landlords and tenants to improve the energy efficiency of their facilities and increase the use of alternative energy through the following policy actions:

What we heard: Participants strongly suggested that the GN "get its house in order" and demonstrate leadership by retrofitting its facilities and adopting green purchasing policies.

Existing Buildings

- Enhanced Energy Retrofit Standards for Existing Buildings

  The GN will develop a new Energy Code for Retrofitting Existing Buildings, which will take into account current energy prices and Nunavut's unique arctic environment. The new energy code will be mandatory for all major retrofits requiring a building permit and inspection, but will be voluntary for small retrofits. Further research will be undertaken to assess the feasibility of adopting a mandatory energy audit and retrofit when existing buildings are sold—similar to ones used in other jurisdictions.

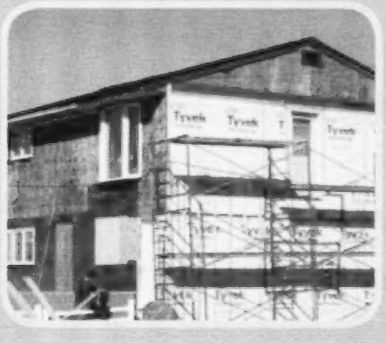
- Government of Nunavut Existing Building Retrofits

  The Department of Community and Government Services' Nunavut Energy Management Program will establish an energy-efficiency target of a 20% reduction in energy consumption for its owned buildings. Initially, all of the GN's facilities located in Iqaluit will be retrofitted, followed by buildings in Nunavut's other 25 communities. Retrofit efforts will be replicated in all existing municipal buildings, the commercial buildings owned by the Nunavut Housing Corporation, and in the GN's leased buildings.

Quick Start

Nunavut Arctic College joined the Building Environmental Systems Network of Colleges and is piloting the program with Government of Nunavut employees.

The GN is planning to launch a $9 million energy management plan that will reduce energy consumption by 20% in 40 of its Iqaluit buildings.



Quick Start

Nunavut Housing Corporation constructed a five-unit townhouse development that is 25% more efficient than required by the 1995 Energy Code, and will voluntarily build all new houses to achieve a 25% reduction in energy consumption over the existing code.

- Public Housing Energy Retrofit Program

  Under the leadership of the Nunavut Housing Corporation (NHC), a strategy will be developed (including an energy-efficiency target) that will lead to the retrofit of all economically appropriate, existing, housing units. It will also include the integration of clean alternative energy, an energy-efficiency tracking mechanism and annual reporting. A pilot project will be identified and initiated by the NHC.

- Best Practices Energy Guide

  The GN has developed and adopted a *Good Practices Energy Guide* to provide guidance to its operators, managers, and staff. The Department of Community and Government Services will amend the guide by incorporating a best-practices section that identifies the "best available technology and practices" for managing energy in buildings. The GN will demonstrate the benefits of energy efficiency and alternative energy by adopting the best available technologies and practices and transfer its knowledge to the private sector.

- Government of Nunavut Leased Buildings

  A working group consisting of representatives from the Department of Community and Government Services, Nunavut Housing Corporation, the Nunavut Association of Municipalities, and property management firms that lease buildings and space to the Government of Nunavut will be created. The working group will assess current barriers to energy efficiency and adopt necessary changes. This may include model lease agreements. An action plan will be developed that allows for the quickest possible implementation of both new and modified leases.

- Residential, Commercial and Industrial Buildings Energy Retrofit Program

  The GN will develop an integrated building energy-efficiency and alternative-energy program that addresses the common barriers that face private owners in Nunavut. The program will provide information, building labels, energy audits, and education and financial tools. It will be integrated with Natural Resources Canada financial and information incentives and be tailored to Nunavut's unique arctic environment. It will integrate the Government of Nunavut's *Good Practices Energy Guide*.

New Buildings

- Nunavut Energy Code for Buildings

  The energy-efficiency performance of buildings is embedded in the National Building Code, which is a voluntary code until adopted by a provincial/territorial government. The Government of Nunavut currently uses the 1995 version of the National Energy Code for buildings. The GN will assess and upgrade the existing Nunavut Energy Code to reflect today's energy prices and Nunavut's unique arctic environment.

- Energy Star Labels for New Buildings

  To encourage energy-efficiency levels beyond the energy code standards and to allow consumers to find the best available, energy-efficient buildings, the Government of Nunavut will introduce a building-labelling program.

- Government of Nunavut New Commercial Building Program

  GN staff will work with architects and engineers to ensure that government and public-sector buildings are designed to meet energy-efficiency and alternative-energy requirements. Building managers will use the Leadership in Energy and Environmental Design Standards (LEEDS) and incorporate arctic conditions into their designs. The GN will seek ways to mandate a minimum rating in all new buildings.

- Public Housing New Building Program

  The Nunavut Housing Corporation in conjunction with Nunavut Tunngavik Incorporated has developed and is negotiating a 10-year housing program with the federal government. Initially, 725 new housing units will be built. They will be built at an energy-efficiency level that is 25% above the current code requirements. This was successfully piloted in 2007 with a five-unit building. Strategies and innovations will be investigated to identify further savings opportunities, and policies will be instituted to ensure that all new housing is energy efficient.

- New Building Support Program

  The GN will initiate a program that will assist Nunavut private-sector building owners to access information and financial incentives, enabling them to build the most efficient building possible. The Government will work with agencies and stakeholders to investigate Nunavut specific tools and services that will enhance the service. Some enhancements could be financial incentives to cover the incremental costs of an energy-efficient home or to install a solar water-heating system.

Equipment

- Nunavut *Energy Efficiency Act*

  The GN introduced its *Energy Efficiency Act* in the summer of 2007 in order to restrict the sale of inefficient, incandescent light bulbs. The Government of Nunavut will enhance the *Energy Efficiency Act* to include further standards such as minimum energy-efficiency standards for electric and fuel appliances. It will introduce an "Arctic Star" logo to identify products that are energy efficient and suitable for use in the Arctic, and will require the collection of statistics and information on energy use and alternative energy.

- Efficiency Incentives

  The GN will initiate incentives that discourage the sale of inefficient electrical and fuel equipment. In this way, the Government will ensure that Nunavummiut have access to the best available equipment based on Nunavut's unique arctic environment and energy prices. The equipment will include domestic appliances such as clothes washers and dryers, stoves, refrigerators, water heaters, and furnaces. This initiative will be coordinated with the Government of Canada's minimum efficiency legislation and process.

- Green Purchasing Policy

  Existing GN purchasing policies do not incorporate consideration of energy efficiency or source (e.g. clean, renewable sources of energy are not given preference). A review of the current purchasing polices will be undertaken, leading to the development of a green purchasing policy. The policy will be introduced to purchasing managers through training workshops and training manuals.

Quick Start

The Government of Nunavut has introduced legislation that will restrict the sale of inefficient incandescent light bulbs, thereby reducing greenhouse gas emissions by 1,300 tonnes a year.

- Appliance Replacement Program

  The GN will design and introduce an appliance replacement program that incorporates tools to accelerate the adoption of energy-efficient appliances. It is expected that program elements will include: financing, information, bulk purchasing, and disposal of replaced appliances. The replacement program will be integrated with the retail point-of-sale information program as well as Nunavut Housing Corporation energy programs that include appliance replacement.

Transportation Energy Initiative

The GN will motivate Nunavummiut to purchase energy-efficient vehicles, to maintain them, and to introduce more efficient energy-management practices through the following policy action.

- Transportation Energy Strategy

  A multi-stakeholder group consisting of both private - and public-sector officials will review current transportation energy practices and develop a strategy for transportation energy use. The transportation strategy, once approved will be implemented or integrated into future Government plans and programs. A number of short-term initiatives will be piloted to determine their impact on transportation energy use in an arctic environment. These may include: a review of current GN travel policies, a five percent reduction target for government-related travel, the testing of hybrid vehicles, public transportation in Iqaluit, and graduated registration fees based on the size of vehicle engines.

Objective

The Government of Nunavut will develop and implement a series of policy actions that will increase the adoption of clean, renewable, domestic energy sources to replace fossil fuels in the generation of electricity and the provision of heat and hot water.

What we heard: Large energy consumers in Nunavut expressed an interest in developing their own electricity generation sources and selling any excess power to QEC.

Policy and Planning

The GN will initiate a technical and economic study to identify and quantify the various clean, alternative energy sources that are available for each of its 26 communities.

- Alternative Energy Resource Study

  Working with external stakeholders, the GN will undertake an alternative energy cost-benefit analysis to determine the availability and economics of clean, renewable energy sources. Included will be geothermal, wind, solar, small-, in-river- and tidal-hydro, and energy from waste. Based on the results of the study, the GN will develop a renewable energy plan for Nunavut.

- Independent Power Purchase Policy

  The GN will ask QEC to consider developing and implementing, where appropriate, an Independent Power Purchase Policy that respects the integrity of the system and enables the private sector to develop clean, alternative energy projects and sell its surplus power to QEC.

Alternative Energy for Electrical Generation

- Hydro-electricity

Hydro-electricity is generated by the force of falling water and is one of the cleanest sources of energy; it is reliable and cost effective. Hydro-electricity technology has been used in the Arctic for more than 70 years. Renewable-energy options for electricity generation in Nunavut include wind, solar and water. As technologies improve, solar and wind will have greater potential in the Arctic. In the meantime, QEC is concentrating on hydro-electricity.

QEC has undertaken and completed pre-feasibility studies for several potential hydro-electric generation sites and has initiated studies which focus on a single storage site at Qikiqgijaarvik and supporting run-of-the-river facilities at Akulikutaq and/or Tungatalik and Qairulituq. If the studies are positive, licences are approved, and funding is available, the QEC anticipates making Nunavut's first hydro-electric generation facility operational by 2012. QEC will, at a later stage, investigate the feasibility of hydro-generation projects in communities in the Kivalliq and Kitikmeot.

Quick Start

Through its Residual Heating Program, Qulliq Energy Corporation has reduced the consumption of fossil fuel by more than two million litres annually in Iqaluit and Rankin Inlet.

- Existing Diesel-Generation Facilities

  About 12 million litres of fuel are used annually to generate electricity for Iqaluit. This is one-third of the total consumed for electricity generation in Nunavut. Iqaluit's peak demand, at nine megawatts, is the largest electricity market in the Territory. These factors, coupled with the ongoing growth of the Capital, create the best opportunity in Nunavut to reduce diesel consumption.

  QEC will continue its program to replace inefficient diesel generators with modern, more efficient ones, to investigate clean fuels, fuel additives and methods of improving the efficiency of its existing diesel generators.

Alternative Energy for Heat and Hot Water

The GN will implement a series of demonstration projects to determine the feasibility of various alternative energies for heat and hot water.

- Solar Water-Heating Project and Solar Wall

  A pilot project will demonstrate the feasibility and economics of solar water heating and solar walls in an arctic environment. The technologies will be used to heat water in buildings with a substantial hot-water requirement. The GN will also investigate opportunities that may be offered by solar photo-voltaic cells and small wind-turbines.

Energy from Waste

QEC and the GN will expand the use of energy from waste through the following policy actions.

- QEC's Residual Heat Program

  QEC will expand its successful, residual heat program to all communities where economically and environmentally viable. As well, in conjunction with the Government of Nunavut, it will identify and pursue energy-from-waste and co-generation opportunities.

- Energy from Municipal Waste

  The GN will undertake a feasibility study to determine the potential for small-scale energy-from-waste projects in Nunavut. Based on the results, the GN will initiate a pilot project in one municipality.

Objective

To reduce Nunavut's reliance on imported fossil fuels by integrating sustainable energy policy into overall Government policy.

Sustainable Energy Policies

The GN will review all of its key policies for energy impacts and modify them to encourage the adoption of energy efficiency and alternative energy.

- Nunavut Energy-Use Database

  The Government of Nunavut will develop a Nunavut Energy-Use Database to provide the data and information necessary for the development of sound energy policies, the identification of key performance indicators, and monitoring and reporting on progress of the Nunavut Energy Strategy through the Minister of Energy's Annual Report to the Legislature. This work will lay the foundation for the inaugural Nunavut Energy Awards.

- Affordable Energy Fund

  The GN's energy-subsidy programs are multi-layered and complex, making it difficult to monitor and track energy subsidies. As a result, the true cost of meeting Nunavut's energy demand is difficult to ascertain. Most Nunavummiut do not know the true level of subsidization because of this complexity. The general lack of public knowledge of the high level of subsidization is one reason why the Government is urged to increase subsidies when energy prices rise, as they have over the last several years.

  An affordable energy fund would include a tracking and reporting mechanism. It may also include the management of direct and indirect subsidies.

- Energy Subsidy Structure

  An energy subsidy working group will be created to identify and provide recommendations regarding policies that could be changed to encourage energy conservation and efficiency and the adoption of clean, renewable energy. Where appropriate, some consumption-based energy subsidies may be turned into incentives to encourage these changes. The working group will develop an implementation plan which will identify options and assess their viability through pilot projects. The energy-subsidy structure will be modified based on the success of the pilot projects.

What we heard: Participants acknowledged that the current subsidy system rewards consumption and discourages energy efficiency and the use of clean renewable energy, and supported the idea of pilot projects to test new subsidy structures.

Quick Start

The GN will proclaim legislation creating an Affordable Energy Fund on Nov. 1, 2007. The AEF will be managed by the Department of Finance. Funding will be made available for alternative energy and efficiency projects. In addition, the department will track direct and indirect energy subsidies.

Quick Start

In 2006, Qulliq Energy Corporation launched the Nunavut Energy Centre to provide energy-efficiency and alternative-energy advice to Nunavummiut.

- Nunavut Energy Centre

  The GN will initiate a review of the reporting structure of the Nunavut Energy Centre and its funding and relationships to the Government of Nunavut, Qulliq Energy Corporation and the federal government. The review will also look at building strong relationships with potential private-sector stakeholders.

- Petroleum Products Division and Qulliq Energy Corporation

  QEC and the Department of Community and Government Services are reviewing the business and working relationship between QEC and the Petroleum Products Division. Ongoing volatility and high prices on international oil markets underline the need to periodically review operations, and make adjustments if necessary, to ensure that the very best approaches are being used to deal with current and emerging oil supply and pricing issues.

- Spill-Reduction Policy

  The Department of Environment will work with the Petroleum Products Division and the Energy Secretariat to incorporate training and tools designed to reduce the occurrences of fossil-fuel spills in Nunavut. One of the suggested tools is to ensure that successful bidders for fuel-distribution contracts are fully aware of their responsibilities with respect to fuel spills, and that their employees are trained in spill prevention.

Objective

The GN will oversee the development of Nunavut's uranium, oil and natural gas resources to ensure that the development is environmentally and economically sustainable.

Uranium

The price of uranium on international markets has doubled over the last year, due to increasing demand for the radioactive metal which is used to fuel nuclear reactors. Concern about climate change from greenhouse gases stemming from the use of fossil fuels is encouraging some countries, including some Canadian jurisdictions, to expand nuclear-generation capacities. Nuclear stations do not produce greenhouse gases, but do create radioactive waste material.

With strong uranium prices and no new major mining projects set to come on line in the world, Nunavut's uranium reserves are attracting the attention of uranium miners. The Government of Nunavut recently released guiding principles for the development and mining of uranium to ensure that it is environmentally sound and provides benefits to Nunavummiut.

What we heard: Many participants wanted nuclear energy studied as part of the supply mix, but not implemented until all supply and disposal of nuclear waste issues are addressed.

Oil and Natural Gas

Nunavut has five and 15 percent, respectively, of Canada's known reserves of oil and natural gas. High international prices are improving the possibility that development of these reserves will become economically feasible.

Policy Actions

Several policy actions are being undertaken to ensure that the benefits of uranium, oil and gas development accrue to Nunavummiut and that the reserves are developed in an environmentally responsible manner.

- Devolution Agreement

  The GN is ready to negotiate a devolution agreement with the Government of Canada to ensure that the Territory benefits from and manages its own mining and energy resources.

- Uranium Guiding Principles

  The GN has developed a set of guiding principles to ensure that the development of its uranium reserves is environmentally and economically sustainable.

- Development Partnership Agreements

  The GN will continue to use development partnership agreements, which include a fuel tax rebate for mining and minerals companies, as an incentive to encourage development of the mining industry in Nunavut.

Chapter 7 – Conclusion

While opportunities for making real and positive changes in the energy sector are great, some difficult decisions lie ahead. Real solutions will require positive changes in consumer behaviour, government operations and cooperation among governments, departments and agencies. Education about true energy costs and the environmental consequences of energy choices is critical.

Displacement of some of the fossil fuels Nunavummiut use by other sources will result in favourable environmental impacts and also should result in a portion of the economic benefit of energy being retained in Nunavut, even if the overall cost of energy is not significantly decreased.

Currently, energy represents a financial and environmental burden, but by taking a clear and careful look at our energy options, Nunavummiut can develop energy as a tool and resource for Nunavut's future. This strategy outlines some of the policy actions that the GN will initiate between now and the year 2020.

By implementing these policy actions Nunavut will go a long way towards meeting this strategy's vision of having a sustainable energy system that is secure and environmentally responsible. And, we will provide real economic benefits to Nunavummiut, both today and tomorrow.

What we heard: Expressing great pride in Nunavut, participants stressed the importance of Ikummatiit and their desire to assist the Government of Nunavut in developing a "world class" energy system that fairly serves all Nunavummiut.